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ABSTRACT

Theories of adult development are reviewed and considered in relation to the role of higher education and the educational methods employed. The literature is divided according to two perspectives: issues and tasks that are characteristic of chronological periods in the adult life cycle; and developmental stages that have no strict relationship to age. The discussion of life cycle stages considers age norms and cultural norms, epigenic timing and life tasks, the concept of life structure, and limits of life cycle research relating to sex differences, ethnicity, and social class. Since education has been organized primarily around the developmental tasks of early adulthood, the life cycle perspective may promote rethinking the role of education in relation to later stages of the life cycle. The discussion of hierarchial sequences of development considers stages of development in a structuralist perspective, strands and levels of development, Loevinger's theory of ego development, and implications for education. Application of the theoretical perspectives to educational approaches is discussed with regard to: development as an outcome of study, education as a support of life transitions, program development and strategy, curriculum and teaching methods, faculty development and evaluation, and career development, counseling, and support services. A bibliography is included. (SW)

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AAHE-ERIC/Higher Education Research Report No. 4, 1980

Adult Development: Implications for Higher Education

Rita Preszler Weathersby and Jill Mattuck Tarule

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Foreword

Adults are returning to higher education institutions in increasing numbers. A part of this surge in enrollment among the non-18-to-22-year-old population is due to the opportunities that women, minorities, and other adults believe college and university training will offer for their personal and professional development. Yet uses of developmental theories about human growth and needs are seldom in evidence in the college or university classroom. Researchers such as Perry, Loevinger, and Levinson have done studies that describe aspects of adult development. Obviously, teachers themselves fall somewhere in the developmental spectrum, which has a direct bearing on their teaching style and perception of student achievement, especially in teacher-student and student-student interactions.

This Research Report is one of the few studies to combine a survey of adult developmental theory with its application and implications in a higher education setting. The authors, Rita Preszler Weathersby, assistant professor, Whittemore School of Business and Economics, at University of New Hampshire, and Jill Mattuck Tarule, dean of the graduate program at Goddard College, provide readers with a conceptual groundwork for the use of adult developmental theory in course and program planning for college students of all ages. This study should also help faculty and administrators interpret individual differences among their student population in ways that foster human development in a formal learning environment to a greater extent than has occurred in the past.

Jonathan D. Fife
Director
ERIC® Clearinghouse on Higher Education

Preface

The AAHE-ERIC/Higher Education Research Report series is usually directed to administrators, deans, and faculty in higher education, undoubtedly busy people who simply cannot keep up with the ramifications of research in each field of study bearing on higher education. The focus of the series is on applications of research. As we wrote this monograph we faced a dilemma because research in adult development is new and adults are an uneasy and often unacknowledged clientele in most institutions of higher education. Also new is a developmental approach to the design of education, for what grows out of this research is a focus on the individual rather than the institution. The starting point is different, as are the premises on which education is based.

Nowhere is there a small volume that presents the range of research in adult development that we have tried to present here, to say nothing of implications or practical applications. We wondered if busy administrators would read what we have written, especially if we started with research and only belatedly got to applications. Our choice was to present the research first. Because applying these theories relies first on understanding them, and because the result of this understanding is to change the premises and scope of one's thinking, we felt we had no alternative. Also, this choice reflects our conviction that knowledge of adult development provides the beginning of an interdisciplinary, theoretical base for adult education. And then we must hasten to say that the focus on adults is arbitrary; the same principles could apply to learners of any age.

Thus, the audience for this monograph is indeed broad. In our minds, it includes scholars and practitioners in adult education; administrators and faculty in continuing education, community colleges, and nontraditional education; directors and staff of counseling and student services programs; a variety of people concerned with federal policy and programs as they affect career opportunities and quality of life for adults; and, finally, administrators and faculty in traditional institutions for whom this research can enliven their thinking and teaching, regardless of the age of their students.

We ask you to be a self-directed learner. If your concern is with application, start near the end of the book. If your curiosity or fascination is with adult development, read this in

the sequence we present. We are excited about this research, and have found many opportunities to use it in our own teaching and administrative duties. We are glad for the opportunity to present it in this series.

Rita Preszler Weathersby
Jill Mattuck Tarule

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Overview

Assumptions and premises

Adult development is just emerging as a field of study. Current research is drawn from many disciplines, is highly variable and incomplete, and is as yet without a commonly agreed-upon vocabulary or unifying theory. Nevertheless, even in its academic infancy, this research provides a provocative source of information for those who teach and administer in institutions of higher education. The value of any new theory or body of knowledge is that it focuses attention on elements in a situation not previously seen, or defines a new pattern, or allows an energizing idea to emerge as an impetus to action. This change, in the terminology of gestalt psychology, creates a new figure-ground relationship, which we can see as an apt metaphor for the subject of this monograph.

The essential focus of a developmental perspective is on a somewhat predictable sequence of growth, adaptation, and transformative change. We view this sequence as describing individuals and, ideally, institutions as well. Directing attention to development can counteract personal and institutional tendencies to teach as one was taught and thus to choose blindly in matters of educational policy and pedagogy. Most important, starting with the developmental needs of individuals and considering the design of education in response permits a scrutinizing of institutions that leads toward humanizing them.

In this monograph we review alternative ways of describing adult development and comment on the impact of our understanding of these processes in relation to present and future approaches to the operation of institutions of higher learning. We have divided the literature into two basic perspectives: the first describes characteristic issues and tasks of chronological periods in the adult life-cycle; the second describes developmental stages that have no strict relationship to age but instead represent individual trajectories of maturation. These latter theories describe successive changes in a person's basic ways of thinking, feeling, and making sense of social situations and personal experience.

These perspectives overlap. The word *development* takes on different meanings across perspectives and sometimes among researchers with the same perspective. Because there is no grand

scheme, each theory or group of researchers provides a different set of lenses through which to view the process of education. We start with a mere recognition of the demographics of adults' increasing participation in higher education. We move to considering the inner changes associated with higher education. Far beyond the implications of particular concepts of development is a more persuasive question concerning whether and how institutions respond, if at all, to the presence of adult students. Our conviction is that most institutions can be much more responsive than they currently are to the developmental needs of their constituents of all ages: students, faculty, administrators, and staff.

Concepts of development

One of the most general definitions of development refers to orderly and sequential changes in characteristics and attitudes that adults experience over time. Knox offers this definition in a comprehensive handbook on adult development and learning (1977, pp. 9-13). As he explains it, earlier characteristics help shape later characteristics, and an understanding of these antecedent-consequent patterns can be useful both to the adults experiencing them and to anyone who wishes to assist.

This general view of development, concerned with patterns of change and continuity, is a useful initial framework; however, not all change is synonymous with growth or development. Changes can be purely external and need not imply maturation, improvement, or predictable sequentiality. An important point, made by Knox (1977) and corroborated by many others, is that while developmental changes occur over time, few occur strictly as the result of time. There is something more involved. The dynamics involve learning that is irreversible and sometimes at the fundamental core of our lives. Further, the process of developmental change implies both choice and necessity in interaction with life circumstances. Development is not merely additive; it involves a process of qualitative change.

The major significance of concepts and theories of development is their articulation of patterns of individual variation, together with some idea of the dynamics of change over time, as an individual goes from one set of circumstances and patterns to another. Adults as a group of students and as individuals are sometimes embarrassingly diverse, and that is the challenge of their presence in higher education. Research on adulthood presents patterns of individual differences on many dimensions; knowing them can engender a more thoughtful response, one

that is more likely to facilitate the qualitative changes implicit in the aims of higher education.

Adult students in higher education

Adult students as a group represent more diversity in life situations, goals, previous experience, skills, intellectual capacities and styles of learning than most institutions are accustomed to acknowledging or planning for. This is especially true of public institutions, as higher education—at least at the bachelor's level—becomes almost a necessity for every working citizen. It also has become a way back to work and to more meaningful activity for many adults out of the workforce or dissatisfied with their lives or jobs. The "new students" are diverse—women, minorities, older versions of traditional-age students, professionals seeking upgrading, and those who lost out on a previous chance at college because of lesser opportunity or ability. This diversity of students implies that some response has taken place, whether grudging or enthusiastic, but more importantly, it represents an opportunity for reconceptualizing the role of higher education.

Several social trends combine to create this opportunity. The adult segment of our population is growing proportionate to a decrease in number and relative size of the youth cohort, and although the exact nature of the demand is uncertain, adults are increasingly participating in a wide variety of educational opportunities in academic, professional, vocational, and avocational realms (Gilford 1975). With declining enrollments of youth of traditional college age, it represents enlightened self-interest for many institutions of higher education to restructure educational programs to serve a more diversified adult clientele. Additionally, with new patterns of family and work, it is becoming increasingly imperative as a matter of social policy to break the lockstep of one-chance matriculation from high school to college and to create a variety of flexible second-chance educational opportunities for individuals of all ages and motivations. In this way the university helps to create what could become a "learning society." Of course, the university is not the only actor here: we have a vast system of postsecondary education, and adults take advantage of many nonformal learning opportunities as well (Tough 1968a, 1968b, 1971). Most social institutions will need to be involved if we create a society more responsive to the educational and developmental needs of its citizens (see Bailey 1976). But here we are concerned only with higher education.

Many institutions have responded creatively; they have expanded offerings in continuing education and created external

degree programs, time-shortened degree programs, alternative colleges, weekend colleges, individualized degree programs, and revitalized adult education programs.*

However, only a few have looked at the logic of those efforts with the intent of designing environments that support or promote development. This is the real challenge, and it applies to traditional classroom instruction as well as to external degree programs. Adults can become an unsettling and unacknowledged clientele except in programs designed specifically for them. Acknowledged, they can provide the impetus for new definitions of quality in teaching, counseling, and learning. The challenge of responding appropriately to adult students is to design programs that are theoretically rationalized and not merely add-ons to existing programs. Adult development theory is not a panacea in this regard; however, it does provide some starting points toward application and toward an interdisciplinary base for new approaches.

Among the recommendations flowing from this analysis are:

- Educators should avail themselves of the opportunity to take part in the general social trend toward humanizing institutions; knowledge of adult development enables this to be realized.
- Response to student diversity, as described by developmental theorists, should become the basis for change in the direction of creating standards of quality.
- Institutions should prepare to respond to the extremely diverse group of students who are beginning to dramatically change the character of higher education.

To do this, institutions must: (1) identify groups to be served; (2) assess the learning needs and goals of this clientele; (3) set up educational goals that reflect a commitment to individual development; and (4) establish educational delivery systems to realize these goals.

*For examples see: Keeton 1976; Medsker et al. 1975; Cross and Valley 1974; Hesburgh, Miller, and Wharton 1974; Houle 1973; the Carnegie Commission on Higher Education 1973: also *Resource for Change*, a description of current grant projects of the Fund for the Improvement of Postsecondary Education.

Life-Cycle Stages

Basic concepts

Our starting points are with, first, the concept of cycles and stages and second, the certainty that adulthood is not a stable and monolithic state but is divided into successive life periods, each of which ushers in its own variety of learning tasks. Recent research indicates that adults' lives are indeed patterned in predictable sequences; and that there are certain key issues and tasks usually associated with each life stage.

A *life stage* is an age-linked period in which certain issues and adaptive tasks are likely to be paramount. (See Table 1 for a brief characterization of adult life-cycle stages.) Such tasks are marker events that "mark" the period or its boundaries. Additionally these stages imply characteristic psychological stances many of us adopt in relation to life events. The age linkings are provocative but not prescriptive; researchers' findings differ and there is room for individual idiosyncrasy.

Changes in life stages involve changes in one's life structure. *Life structure* describes the way one is externally related to society by social roles in both work and intimate relationships. It also describes the internal meanings that these roles take on, including an internal clock that marks the passage of time in terms of changed perceptions of one's place in the life cycle. Gould, whose work (1972, 1975) explores changes in people's attitudes about various aspects of their lives in relation to the passage of time, writes:

> While children mark the passing years by their changing bodies, adults change their minds. Passing years and passing events slowly accumulate like a viscous wave, eventually releasing their energy and assuming new forms in altered relationships with both time and people (1975, p. 78).

Examples of varying versions of adults' life stages and the events, tasks, and stances associated with them are presented in charts throughout this chapter. They represent the work of Neugarten, Erikson, Levinson, Gould, and Havighurst (see Figures 1, 2, 3, 4).

The concept of *developmental task* is a broad one. Some tasks appear to be external in nature, such as learning the skills associated with making a living, organizing a household, becoming a parent, or planning for retirement (see Havighurst, in

Table 1: A Brief Characterization of Adult Life-Cycle Stages

Life Phase	Major Psychic Tasks	Marker Events	Characteristic Stance
Leaving the family (16 or 18 to 20-24)	Separate self from family; reduce dependence on familial support and authority; develop new home base; regard self as adult.	Leave home; new roles and more autonomous living arrangements: college, travel, army, job. Initial decisions about what to study, career, love affairs.	A balance between "being in" and "moving out" of the family.
Getting into the adult world (early 20's to 27-29)	Explore available possibilities of adult world to arrive at initial vision of oneself as an adult. Fashion an initial life structure; develop the capacity for intimacy, create a Dream; find a mentor.	Provisional commitment to occupation and first stages of a career; being hired; first job; adjusting to work world; quitting, being fired; unemployment; moving; marriage; decision to have a child; child goes to school; purchase of a home; community activities; organizational roles.	"Doing what one should." Living and building for the future; transiency is an alternative track.
Age 30 transition (late 20's to early 30's)	Reexamine life structure and present commitments; make desired changes, particularly to incorporate deeper strivings put aside in the 20's.	Change occupation or directions within an occupation; go back to school; love affair; separation; divorce, first marriage; remarriage.	"What is life all about now that I'm doing what I should? What do I want out of life?"

Table 1 (continued)

Life Phase	Major Psychic Tasks	Marker Events	Characteristic Stance
Settling down (early 30's)	Make deeper commitments; invest more of self in work, family, and valued interests; for men and career women, become a junior member of one's occupational tribe; set a time-table for shaping one's life vision into concrete long-term goals; parenting.	Death of parents; pursue work, family activities, and interests; children old enough for mother to return to school.	Concern to establish order and stability in life, and "making it," with setting long-range goals and meeting them.
Becoming one's own person (35-39 to 39-42)	Become serious member of occupational group; prune dependent ties to boss, critics, colleagues, spouse, mentor. Seek independence and affirmation by society in most valued role. For woman whose first career is in the home, a growing comfort with family responsibilities and independence to seek valued interests and activities.	Crucial promotion, recognition; break with mentor.	Suspended animation; waiting for the confirmatory event; time becomes finite and worrisome.

Table 1 (continued)

Life Phase	Major Psychic Tasks	Marker Events	Characteristic Stance
Mid-life (40's) transition (early 40's)	Create a better fit between life structure and self; resolve experience of disparity between inner sense of the benefits of living within a particular structure and what else one wants in life.	Change in activities from realization that life ambitions might not develop; change of career; remarriage; empty nest; a second career for women whose first career was in the home; loss of fertility; death or friend, sibling, or child.	Awareness of bodily decline, aging, own mortality; emergence of feminine aspects of self for men, masculine aspects for women.
Restabilization (a three-year period around 45)	Enjoy one's choices and life style.	Become a mentor; share knowledge and skills with younger friends and associates; contribute to the next generation; develop new interests or hobbies; occupational die is cast for men.	
Transition into the 50's (late 40's to mid-50's)	Another reexamination of the fit between life structure and self; need for redirection, a whole new beginning for some.	Last chance for women to have a career, or vigorously pursue a deferred life goal or interests—family crises, home duties diminished, change in husband's job status.	An imperative to change so that deferred goals can be accomplished—"It is perhaps late, but there are things I would like to do in the last half of my life."

Table 1 (continued)

Life Phase	Major Psychic Tasks	Marker Events	Characteristic Stance
Restabilization, mellowing and flowering (late 50's, early 60')	Accomplishing important goals in the time left to live.	New opportunities related to career and valued interests; personally defined accomplishments.	A mellowing of feelings and relationships; spouse is increasingly important; greater comfort with self.
Life review, finishing up (60's and beyond)	Accepting what has transpired in life as having worth and meaning; valuing oneself and one's choices.	Retirement of self and spouse; aging; death of friends, spouse and self.	Review of accomplishments; eagerness to share everyday human joys and sorrows; family is important; death is a new presence.

Sources for this chart are Levinson (1974), Gould (1972), Neugarten (1969), and Sheehy (1974). Category titles and time designations are Levinson's. Classifications for the later periods were developed from the data in Weathersby (1977).

Chickering 1980). However there are internal components to coping even with these tasks, and more so with the various and often dissynchronous aspects of living and aging. These have an even greater claim to the development tasks of the life cycle, since they are the intrapsychic work associated with adapting to life's changing circumstances (see Erikson 1968; Gould 1978; Vaillant 1977; and Levinson 1978).

Overall, the focus of most research on the life cycle has been on *adaptation:* adaptation to the events and realities of successive live stages in general; and idiosyncratic adaptations as they are created by individuals and experienced by age cohorts in particular periods of history. A newer focus is on *growth*, on using life transitions to forge greater personal integrity and effectiveness in the world (see Kohlberg 1973; Imara 1975; and Gould 1978).

Another concept is *transitions*. Understanding the nature of particular transitions and the processes by which individuals

cope with transitions is beginning to be a focus of interdisciplinary research (Spierer 1977). Transitions take place in at least three ways: moving through time periods in the lifespan; changing roles (as we age we adopt new roles and relinquish old ones); and through the events that mark transition points (such as entering school, embarking on a career, getting married, becoming grandparents, or losing one's spouse). Very generally, transitions from one period to the next can be due to biology, social roles, career and work, history, or the inner meanings of life events. They may be evident to others (such as balding, having a child, becoming "successful") or may remain unnoticed, although still dramatic, such as losing one's career aspirations. They may be sudden, or more likely cumulative. Transitions may be simultaneous—for example, late adulthood may be initiated by a retirement party that acknowledges a socially dictated change and creates a new mind set for appropriate behavior. No matter how transitions are defined, coping with them provides an occasion for learning.

Timing of transitions: age norms and cultural norms

When a particular transition occurs and what prompts it has been a question of importance for life-cycle research. Neugarten (1971, 1963) describes adult activities on a continuum in which the first half of life is characterized by a future orientation and striving for mastery of the outer world, fostering a sense of "time lived" or one's own history as the significant factor. The second half of life is characterized by a more inward orientation, sponsorship of others, and consciousness of the finiteness of time and the need to set priorities in one's "time left to live." There are clear differences, too, between men and women reflecting the differences across sexes in timing of family and work roles (see Figure 1).

Clearly, the sense of time and timing the individual possesses markedly effects the experience of self in the world and plays a crucial role in prompting significant transitions. The concept of *age norm* is central. Neugarten (1968, 1976) points out that there is a widespread culture consensus about the proper time to leave home, go to college, marry, have children, stop having children, and so on. We carry within us an internal clock and a sense of "proper" age for events to occur. Breaking a norm is difficult, as is adjusting to an event that occurs "off time," such as losing a spouse or child unexpectedly in mid-life or beginning a new career. When transitional events are "on time," they are usually anticipated and less likely to be experi-

enced as crises; however, even anticipated transitions, such as children leaving home or technological unemployment, present challenges and a need for support.

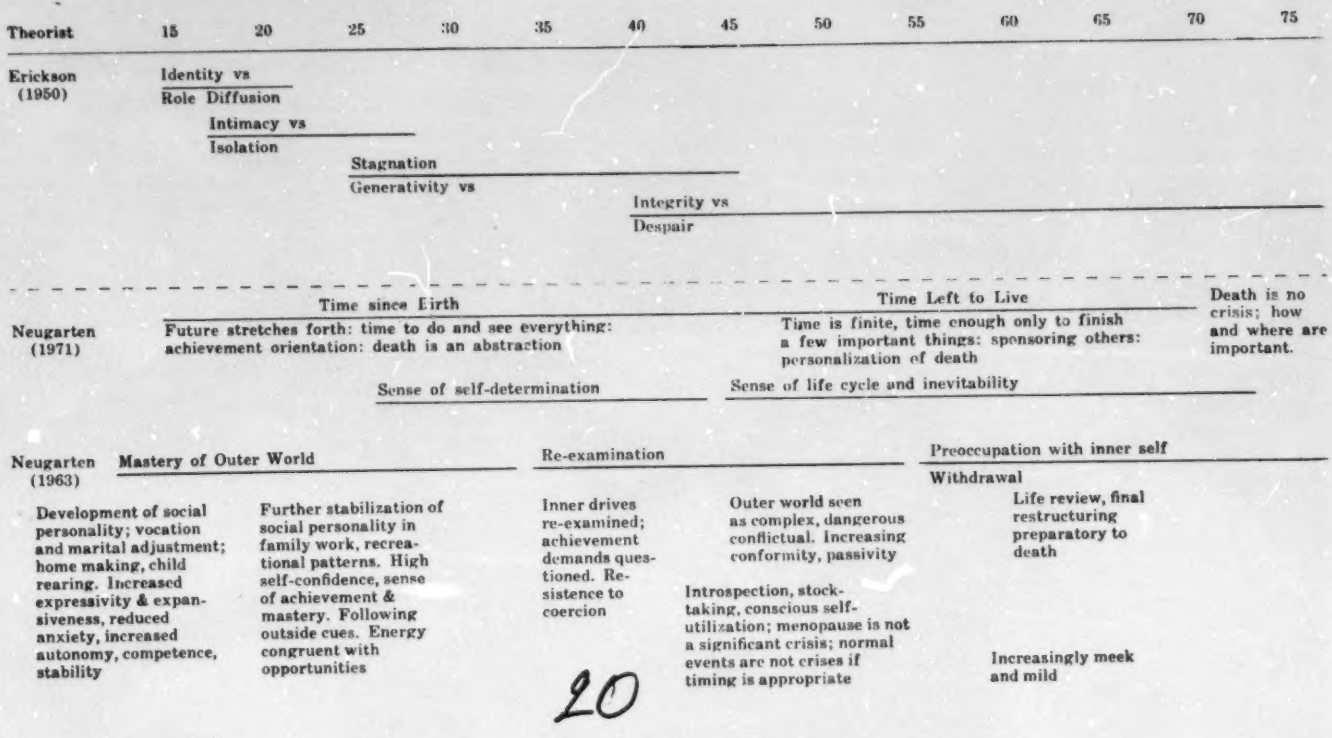
Our institutions have yet to be adequately responsive even to the variation that currently exists. As more adults enroll in colleges, they do so in opposition to earlier age norms with respect to the appropriate time for schooling. But these adult students are also conscious of being out of synchronization with others of their age group, and often perceive themselves behind in their career timetable as well. There are age norms in many careers that make late entry next to impossible. This is particularly unfortunate for women who marry and begin a family as their first career. Professional schools, such as medicine and law, often do not welcome students after age 30 or 35. The mid-twenties is the "appropriate" age for managerial training programs in businesses. And men often have difficulty making a career change, even at 35 or 40, if the career involves some investment by the employer.

Changes in patterns of work and childrearing are creating a much wider variation in timetables and thus a need to recognize new age norms; otherwise, for those whose timing is different from the standard pattern, particularly women (but probably increasingly men as well), further education may represent false promises of access to new and more significant work. Social change has created "age binds" for many adults. Consider, for example, the limited roles available to older women in our society (Jacobs 1979), or the problem of women married to successful husbands who at mid-life are starting a career out of phase with their social status. The breaking of age norms and the setting of new ones coincide with some external life tasks, such as making a living or establishing a career, and with some internal psychic challenges, such as "becoming one's own person." Models of development consistently posit a "person-environment" interaction; variables such as age, sex, and the timing of life events with respect to age norms appreciably affect that interaction.

Epigenetic timing and life tasks

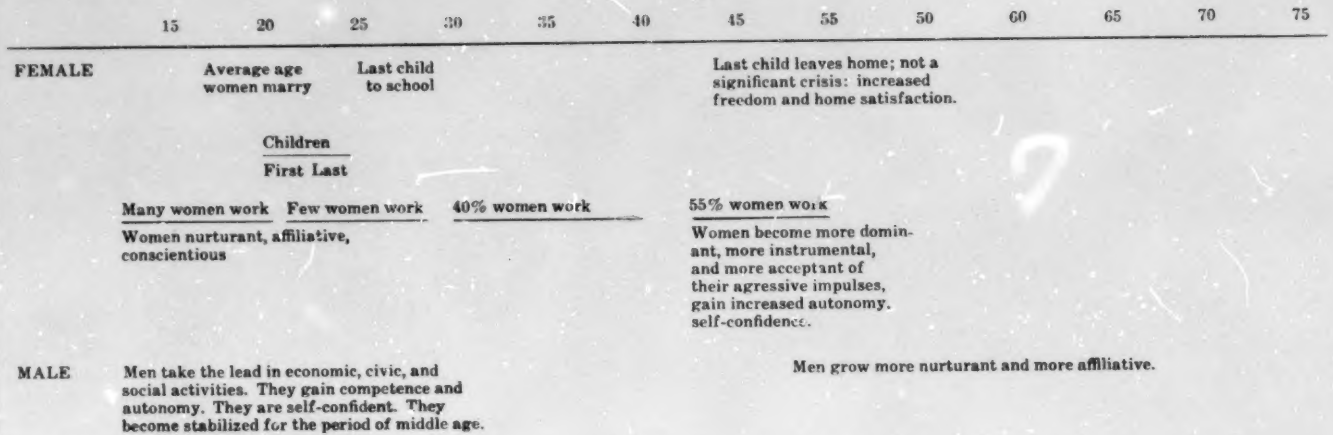
The notion that the life cycle has developmental tasks embedded in it is probably best attributed to Erikson. Erikson quotes Freud as replying to a question about the tasks of adulthood by saying that a normal person should be able to do two things well —love and work. Erikson (1968) has created a grander formulation consisting of critical issues to be resolved at eight stages of

Figure 1: The Life Cycle


Theorist
15
20
25
30
35
40
45
50
55
60
65
70
75
Erickson (1950)
Identity vs Role Diffusion
Intimacy vs Isolation
Stagnation
Generativity vs
Integrity vs Despair
Neugarten (1971)
Time since Birth
Future stretches forth: time to do and see everything: achievement orientation: death is an abstraction
Time Left to Live
Time is finite, time enough only to finish a few important things: sponsoring others: personalization of death
Death is no crisis; how and where are important.
Sense of self-determination
Sense of life cycle and inevitability
Neugarten (1963)
Mastery of Outer World
Re-examination
Preoccupation with inner self
Withdrawal
Development of social personality; vocation and marital adjustment; home making, child rearing. Increased expressivity & expansiveness, reduced anxiety, increased autonomy, competence, stability
Further stabilization of social personality in family work, recreational patterns. High self-confidence, sense of achievement & mastery. Following outside cues. Energy congruent with opportunities
Inner drives re-examined; achievement demands questioned. Resistence to coercion
Outer world seen as complex, dangerous conflictual. Increasing conformity, passivity
Introspection, stock-taking, conscious self-utilization; menopause is not a significant crisis; normal events are not crises if timing is appropriate
Life review, final restructuring preparatory to death
Increasingly meek and mild

20

Figure 1 (continued)



Source: Memphis State University, Institute for Academic Improvement, "Resource Handbook."

the life cycle. Starting with infancy, he conceives of "psychosexual development" as proceeding through a series of critical resolutions of the major task of each step (see Figure 1). The task of infancy is trust versus mistrust; of early childhood, autonomy; of later childhood, initiative; of school-age children, industry; and of adolescence, identity. He assigns to adulthood the task of intimacy from the teens to mid-twenties; generativity (the forties and fifties); and integrity (the sixties and beyond), and sets them in opposition to feelings of isolation, stagnation, and despair. By generativity is meant a concern for creativity and productivity, a voluntary commitment to guide newer generations and younger associates. Having children does not necessarily insure generativity. The final task of ego integration is integrity, a defined acceptance of what has transpired in one's unique history as both valid and necessary.

This definition of life tasks is quite general, and simultaneously intrapsychic and cultural in nature. The origin of these tasks is seen as a matter of internal unfolding according to an epigenetic "ground plan" in which each task has its special time of ascendency. Nevertheless, Erikson's work focuses attention on the importance of each major life period in creating a "vital personality" or wholly functioning person, and on the major intrapsychic issues that underlie many other formulations of life tasks. This appears to be generally valid, although the idea of internal unfolding is questioned by others who have defined the tasks, time periods, and settings more sociologically.

In Erikson's thinking, a developmental crisis is not a catastrophe but a decisive turning point that simultaneously brings heightened potential for intrapersonal integration and increased vulnerability to personality disintegration. Most important, a developmental task is never mastered once and for all. Rather, at the conclusion of each life stage one works out a characteristic balance. This balance can be changed by later experiences; in new periods of transition one cycles back through earlier crises and reaffirms or renegotiates their resolution. This concept offers an insightful perspective on adult "identity crises." In transition, our identity becomes problematic, and we are forced to renegotiate previous resolutions of earlier issues, such as trust, autonomy, initiative, and industry, before proceeding to newer, more integrated and satisfactory versions of intimacy, generativity, or integrity.

Vaillant (1977) has used Erikson's framework in interpreting the results of a major longitudinal study of Harvard men, describing in detail the adaptive mechanisms used as each man confronted life's challenges. He discovered several new tasks:

"career consolidation" as a test between intimacy and generativity, and the task of "keeping the meaning" or "rigidity," after generativity and before integrity. One of Vaillant's most interesting findings, revealed by longitudinal interviewing, is that people cannot be expected to remember accurately the events and meanings of a previous life period. We actually reconstruct our history as we move from one life stage to another. Overall, the contribution of this view of life tasks is the greater empathy and clarity that can come from labeling or naming them as tasks. Love and work—the need to be generative, and the need to consolidate one's career and keep faith with one's dreams—are essential developmental tasks that will arise regardless of how well or poorly one adjusts to life's circumstances. Labeling them helps explain their potency.

The concept of life structure

Levinson (1978) advocates a view of adult development as the evolution over time of an individual life structure. A life structure is the basic pattern or design of a person's life at a given time; it is created by the choices a person makes about occupation, family, and other valued interests within the constraints imposed by environment and circumstance. For the individual the life structure has both external and internal aspects; it includes:

> the external overall pattern of roles, memberships, interests, condition and style of living, long-term goals and the like—the particular ways he is plugged into society. In its internal aspects, life structure includes the personal meanings these have for the individual, as well as the inner identities, core values, fantasies, psychodynamic qualities that shape and infuse one's engagement in the world and are to some degree fulfilled and changed by it (Levinson 1974, pp. 7-8).

Levinson sees the basic task of adulthood as building and modifying one's life structure: working on single components of the structure by making choices about occupation, marriage and family, friends and relationships, ethnology, religion, and the use of leisure. Additionally, one develops by becoming more individuated in personality by resolving intrapsychic polarities such as destruction versus creation, masculine versus feminine, and attachment versus separateness. These tasks take on a different character in each life period, but they remain significant. Like Erikson, Levinson's casting of primary issues into polarities reflects an underlying agreement among theorists that development progresses through the resolution of basically dia-

lectical problems (Riegal 1972). Alternatively, such formulations may indicate a theoretical limit: the paradigms we have available for analysis have not progressed beyond the dialectical stage (Kuhn 1962).

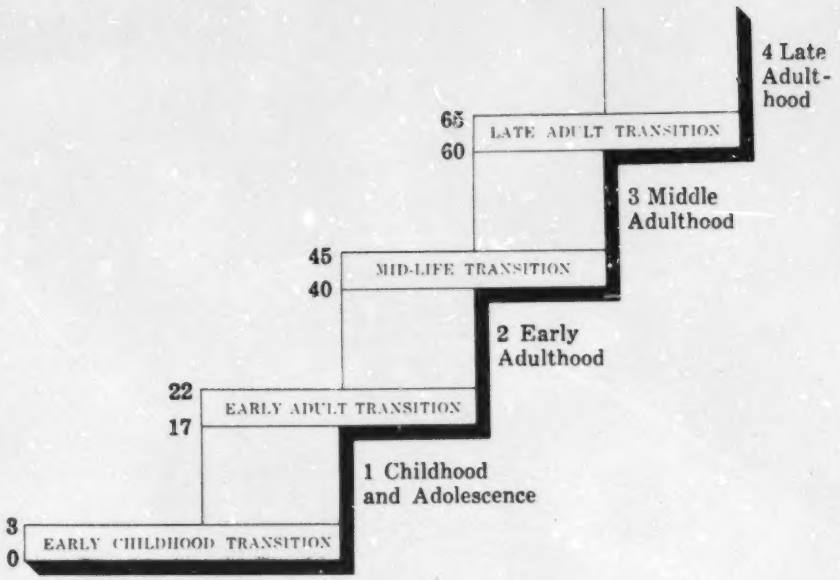
Working with biographical data from the lives of 40 men, Levinson and his associates (1974, 1978) have identified a schema of surprisingly age-linked periods in early and middle adulthood, and have described the nature of each period (see Figure 2). They view life structure as consisting of a series of alternating periods of stability and transition: in a stable period we build a life structure; in a transitional period we question our choices and commitments and perhaps make changes. Both the structure-building and the structure-questioning tasks are of considerable magnitude. Worse, they must be cyclically repeated. Levinson's research seems to indicate that a stable period lasts six or seven years, and ten at most. Even a transitional period ordinarily lasts four or five years.

Two other critical concepts emerge from Levinson's research: the importance of forming and modifying a "dream" (an energizing vision of one's self in the world) as a component of one's life structure; and the importance of forming mentoring relationships, a mentor being a sponsor on life's journey.

One of the things that seems to happen throughout adulthood is a person's attempt to maintain an equilibrium or "goodness of fit" between the life structure and the experience of self. Levinson believes that in creating an integrated life structure an individual can use only some parts of the self, which means that other important parts are left out. Changes in life structure can be seen as attempts to resolve disparities between a person's inner sense of the experience of living within a particular life structure and aspects of self that were neglected or left out when the structure was created. A developmental crisis, then, is the same kind of turning point articulated by Erikson, as Levinson describes it for men undergoing mid-life transition:

> The central issue is not whether he succeeds or fails in achieving his goals. The issue, rather, is what to do with the experience of disparity between what he has gained in an inner sense from living within a particular structure, and what he wants for himself. The sense of disparity between "what I've gotten to this point" and "what it is I really want" instigates a soul-searching for "what it is I really want."
>
> A man may do extremely well in achieving his goals and yet find his success hollow and bittersweet. If, after failing in an important respect, he comes primarily to castigate himself for not being able to "make it," then he is having a rough time; but he is not having a mid-life crisis. He just regrets

Figure 2: Eras in the Male Life-Cycle



Source: *The Seasons of a Man's Life*, by Daniel J. Levinson. Copyright 1978 by Daniel J. Levinson. Reprinted by permission of Alfred A. Knopf, Inc.

> failure. He is having a crisis to the extent that he questions his life structure and feels the stirrings of powerful forces within himself that lead him to modify or drastically change the structure (Levinson 1974, p. 19).

The concept of life structure allows another explanation of the forces that create life transitions. We can speculate that the passing of time sets in motion a series of interacting processes that create pressure on our existing life structure. There are changes in biological functioning brought about by increasing age, changes in the ages of one's parents and children, changes in cultural expectations about what someone of our age and stature should be doing, and finally, progressive shedding of our illusions about the "realities" of adult life as we discard the idealized view we created in our childhood.

Gould's work (1978) offers an alternative elaboration of the inner task of development through successive life stages. Like Erikson, Gould's research grew from his practice of therapy, in which he began to see age variations in what people wanted to talk about in therapy groups (1972). This prompted a questionnaire survey that pointed to age-related differences among adults not in therapy. These results independently corroborated Levinson's descriptions of the issues at each life period, despite some differences in age breaks. Gould emphasizes inner changes in consciousness that are the result of progressively giving up various illusions still held from childhood. For example, in the transition from the late twenties to mid-thirties (ages 28 to 34), Gould describes the major task as becoming aware of coexisting and contradictory forces in one's emotions. With this awareness, the illusion that "What I know intellectually I know emotionally" is often confronted. He argues that adults seem to have an ever-increasing need to win permission from themselves to tackle these inner tasks:

> Childhood delivers most people into adulthood with a view of adults that few could ever live up to. A child's idealized image of an adult can become the adult's painful measure of himself. Without an active, thoughtful confrontation of this image, the impressions of childhood will prevail. An adult who doesn't undertake this thinking and confrontation lives out his or her life controlled by the impossible attempt to satisfy the magical expectations of a child's world (Gould 1975, p. 78).

Transition, for Gould as for Levinson, involves a thoughtful confrontation with the reality of one's own choices and experiences; it necessitates a change in viewpoint, a change Gould sees as transformative.

Limits of life-cycle research: sex, ethnicity, and class

Many of the unresolved questions about life-cycle research have to do with sex differences. Are women's life stages different from men's? Are the developmental tasks of successive life stages different for men and women?

The evidence is fragmentary because of the scarcity of studies about women's lives, longitudinal and otherwise. (Exceptions are Sanguiliano 1978, and Jacobs 1979.) Current concepts and descriptions are derived more from men's lives than women's. Levinson and Vaillant's samples, for instance, included only men and thus it would be incorrect to assume, without more specific verification, that their constructs and their description

of stages also apply to women. Gould's population included both men and women but was cross-sectional. Predominantly, generalizations about all of human development have been made from research samples of middle-class, white males.

Preliminary evidence suggests considerable disparity does exist. Sex-role socialization and differences in the structuring of opportunities result in different patterns of men's and women's involvement in family, education, and work. Thus the *contexts* for development (both internal and external) differ sharply and are sex-role dependent (Miller 1976; also Hansen and Rapoza 1978). This difference in context is true with respect to ethnicity and social class as well--poverty, for example, is not a context that is especially well suited for promoting development. Although the basic concepts concerning life tasks and transitions are likely to apply across most variations of sex and circumstance, the particulars contain the most interesting disparities (Gilligan 1977). Much more research is needed in this area.

Some comparative studies across sexes affirm that the sequence of stages, the life tasks of a particular stage, the mood shifts, the support systems, and the messages sent about how to exist in the world are different for men and women (McCoy 1978; Sheehy 1976, 1974; Maas and Kuypers 1974). The result is very different coping mechanisms for men and women. For example, one study (Lowenthal 1975) reports large sex differences in coping styles and strategies among couples who could be hypothesized to be at the "same" life stage. There are convergences between the sexes at the extremes (high school seniors; pre-retirees) and dramatic divergences in the middle (newlyweds, middle-aged parents). The most critical or stressful periods are different for men and women. Additionally, women consistently report more problems and less satisfaction with their methods of coping, although the intensity of dissatisfaction varies across life periods.

Further, although both men and women in their twenties may be working on Erikson's task of intimacy, there is ample evidence that a young man's major concern through much of his life is his career, whereas a young woman is socialized to place her primary emphasis on family and relationships. The timing of women's life stages with respect to family and career cycles is usually more interrupted than for men; this in itself creates a developmental task of balance and integration that may be of greater intensity for women than men. Women at mid-life returning to the workforce or college are often breaking out of a conformist life pattern, refashioning a dream and life structure. They often have more limited brushes with mentors because of

their in-and-out career paths; often the mentors are male both for traditional careers and for those just opening to women.

These differences can lead to real difficulty. The unevenness in development between the sexes and the oppositional needs create conflicts among couples at the same life periods. Such dramatically criss-crossing trajectories of men's and women's lives leads to the hypothesis that there may be different types of developmental change for women and men, as well as differences in the timing of tasks and transitions.

Life stages and education

One important contribution of life-stage research is that it dispels the notion that adulthood is a stable state in which disequilibrium and distress are always individual matters, unrelated to natural or predictable life transitions. It highlights the larger context of adults' participation in higher education—both in terms of what may motivate participation and what goals or needs are met. An understanding of life-cycle stages demonstrates the personal uses of education. It sheds light on potential answers to a significant question each individual has: What's an education good for? People's needs for education grow out of the larger context of their lives. Education enables the satisfaction of different developmental needs depending on a student's place in the life cycle.

From Gould's work, we know that adults need to give themselves permission to continue developing, and that this process involves honest and thoughtful confrontation with the reality of their life experience. Erikson, Levinson, and Vaillant identify the major psychological themes or developmental tasks that must be faced and resolved in successive life periods for successful adaptation. Levinson's concept of life structure adds the insight of alternating periods of building and then questioning one's life structure. Sheehy's and Lowenthal's identification of the criss-crossing trajectories in men's and women's development also raises important issues. From preliminary work we can assume that women's development is different in content, context, and timing, and that relationships between men and women will involve struggle and some jeopardy.

Needs and uses for education shift with the life cycle and are probably different in periods of structure-building than in periods of structure-questioning. Many adults use formal education as a support in life transitions; they find different uses for education depending on their life stage. Life-cycle research is useful to educators in its clarification of learning tasks embedded

in age-linked life stages and in its emphasis on the requirements for effective coping with transitions.

For example, data from a study of adult students in an external degree program at Goddard College (Weathersby 1977) indicate that "going back to school" is a change in life structure that is linked to other changes, both desired and already accomplished. It appears that some individuals enroll as the result of experiencing a traumatic or "off-time" transitional event; others enroll in the vague uneasiness of a transitional questioning of life structure; and still others enroll in rational anticipation of changed needs. There are underlying commonalities in adults' reasons for enrolling that reflect the adaptive tasks of both successive life stages and individual life patterns.

Similarly, Aslanian and Brickell (1979) have explained adults' participation in learning, both nonformal and formal, on the basis of life transitions. They come to the conclusion that life events provide reasons for learning, although trigger events are necessary to make active learners out of latent learners. This indicates a readiness factor in adults' demand for various forms of education, a factor that is related both to internal changes in self-perceptions and to major life events and changes in external circumstances. The result is a matter of "teachable moments." Education for some adults serves the purpose of altering the "goodness of fit" between their current life structure and desired inner experience of self. It is at least a testable hypothesis that there are predictable populations of adults who are "ready" for specially designed educational programs that meet their needs.

Overall, an educational institution provides a setting for assembling and changing one's life structure. Choices about work, relationships, family, leisure—all of which are components of a life structure—can be influenced by the ideas, practical knowledge and skills, and opportunities provided, either for building a life structure or making a transition. As with other institutions in society, we have organized education primarily around the developmental tasks of early adulthood. We now have an opportunity to rethink the role of education in mediating life-structure transitions and in enabling people in middle and late adulthood to find resources for restructuring their lives.

Hierarchical Sequences of Development

A major contribution of the various theories that provide descriptive sequences of development is that the descriptions articulate and elaborate on possible steps in a process of growth. The life-cycle stages are age-related. In contrast, the steps in these sequences are, for the most part, not age-related but instead examine the nature of an individual's world view and the ways that view can be altered. While life-stage research describes a series of transitions and adaptations, the hierarchical sequences of development describe successive transformations in adults' more inward ways of constructing experience.

Many psychologists have described the development over time of personality characteristics that are essential to adult functioning. Maslow (1970) for example, in studying healthy adults, has identified a hierarchy of human needs ranging from basic physical security to self-esteem and self-actualization. Much of the humanistic approach to education uses this work as a theoretical foundation. Others have described different strands and sequences of develolpment: Schaie and Schaie relate stages of adult cognitive development to periods of the life cycle; Douvan has described a sequence in developing a capacity for intimacy; White has written about the development of humanitarian concern; Green has described the acquisition of purpose; and Torbert has described the development of interpersonal competence (see Chickering [1980] for an overview of all of these). Each description of a sequence is useful to educators because it can sensitize us to an individual's internal experience and ways of making sense of the world. And this can inform educational designs from curriculum to teaching practices.

One major difference among various descriptions of sequences is the degree to which they embody a structuralist perspective. Sequences and stage descriptions in the structuralist perspective not only describe stages in a process of development, they also comply with the formal definitions of structural-development theory; for example, they are wholistic, sequential, transformational, and hierarchical.

Stages of development in a structuralist perspective

Structural-developmental stage theories detail a "map" of the progressive reoganizations of intellect, emotion, character, and

personality at each stage. Thus, each level is a qualitatively different frame of reference for responding to and learning from one's daily experiences. The concept of structure is central to the idea of a developmental stage; each stage is an inferred construct that describes different psychological organizations, or basic mental structures, at different points in one's development. In psychology, these structural-developmental concepts orginate in Piaget's work with children's intellectual and moral thinking. In Piaget's classic definition (in Tanner and Inhelder 1960) developmental stages describe an invariant sequence of mental reorganizations (no stage can be skipped). Stages are hierarchically integrated; that is, subsequent stages incorporate and transform earlier stages, and they represent "structured wholes" or thought-organizations underlying one's basic approach to the world. Development in Piagetian terms (1967, 1970) is understood as progressive equilibration from a lesser to a higher state of equilibrium through mental structures that are continually undergoing transformations and moving toward more complex levels of differentiation and integration. Individuals assimilate experiences to existing thought structures and then accommodate the structures through transformations and recombinations that result in a new and more differentiated structuring of experience. Accommodation occurs as a result of perceived incongruities between experienced event and the thought structures an individual has available to interpret them. When considerable numbers of elements in a structure have been transformed, a new structure or "stage" of development has been reached.

A major issue in structural psychology is measurement of stages. With children, the biological processes of maturation can, in part, be cited as prompting the accomplishment of new structures. Such processes as the motivation for change are not so apparent with adults. This has led to considerable discussion about the qualities inherent in each stage and what theoretical metaphors best describe the nature of development.

The increased interest in adult development promises to push the work another step (see Gibbs 1977). And apart from questions of differences between adult's and children's development, there are also basic measurement problems. For example, a subject being tested responds with thinking that is apparently drawn from more than one (though generally adjacent) stage. While such situations pose dilemmas for measurement, they are less relevant for education and educators. What structural development sequences provide is not only a highly differentiated description of steps in an individual's process of develop-

ment, but also a specific sequencing of steps toward the more adequate, socially responsible, and principled world views. The potential for individuals and the society to attain such views can begin to shape and inform our goals for education.

Strands and levels of development

In the study of structural development, various theorists have examined and articulated different strands of development. A researcher who begins by studying only one strand (for example, the development of faith) also invariably creates a scheme that goes beyond the limits of that particular strand and connects to other strands being identified. Almost all developmental sequences reveal similar progressions from simplistic to complex thinking; from power-oriented to principle-oriented concepts of morality; from conceptions of interpersonal relationships as instruments to ideals of mutual responsiveness; from faith based on magical or conventional thinking to faith based on chosen commitments; and from limited self-awareness to increasingly complex understanding of one's own psychology and others'.

Kohlberg (1969), building directly on Piaget's work, has looked at stages of moral judgment. He longitudinally followed a small sample of men from college years into adulthood. Gilligam (1977) has taken Kohlberg's work and is modifying and reshaping it theoretically with respect to women's development. Fowler (1974) examined stages in the development of faith and religious orientation. Other conceptions of stages include: Selman's (1973) examination of stages in the development of children's abilities for social role-taking; Broughton's (1975) stages of epistemological development; Perry's (1970) sequences of intellectual and ethical development; Kegan's (1979) ideas of the evolution of self; and Loevinger's (1970, 1976) formulation of stages of ego development.

Table 2 illustrates correspondence among the strands and levels of development identified by Kohlberg, Perry, Loevinger, Piaget, and Bloom. Working separately, these theorists have come up with strikingly similar schemes.

There continues to be argument and lively dialog about the exact nature of the correspondence between different researchers' sequences. Agreement is high, however, that most adults are in the "conforming to persons," "conforming to rules," or "principled autonomous" stages. Thus, it is these higher stages that begin to characterize what may be important to adult students (or faculty), in terms of both world view and significant new learning lying before them in the next stage.

Table 2: Stages of Ego, Moral and Ethical, and Intellectual Development

Ego Development	Moral and Ethical Development			Intellectual Development	
	Kohlberg	*Perry*	*Loevinger*	*Piaget*	*Bloom*
Amoral	Egocentric	Basic duality	Stereotypy, conceptual confusion	Symbolic, intuitive thought	
Fearful-dependent	Obedience-punishment oriented	Multiplicity prelegitimate		Concrete operations: 1. Categorical classification	Memorization
Opportunistic	Instrumental egoism and exchange	Multiplicity subordinate		Concrete operations: 2. Reversible concrete thought	Application
Conforming to persons	Good-boy, approval oriented	Multiplicity correlate or relativism subordinate	Conceptual simplicity; stereotypes and cliches		
Conforming to rule	Authority, rule, and social order oriented	Relativism correlate, competing or diffuse	Conceptual complexity, idea of patterning	Formal operations: 1. Relations involving the inverse of the reciprocal	Analysis
				Formal operations: 2. Relations involving triads	
Principled autonomous	Social contracts, legalistic oriented	Commitment foreseen	Increased conceptual complexity, complex patterns; toleration for ambiguity, broad scope, objectivity	Formal operations: 3. Construction of all possible relations	Synthesis
	Moral principle orientation	Initial commitment, implications of commitments, developing commitments		Systematic isolation of variables	
				Deductive hypothesis testing	Evaluation

Source: Arthur W. Chickering, "Developmental Change as a Major Outcome," in ***Experiential Learning: Rationale, Characteristics and Assessment***, ed. by Morris T. Keeton (San Francisco: Jossey-Bass, 1976).

To expand understanding of these various schemes, we turn to Loevinger's theory of ego development, which includes both adolescent and adult experience. Such an examination also provides a way to understand the notion of strands and levels of development, and demonstrates how structural-developmental theories can inform our thinking about adult education.

Loevinger's theory of ego development

The term *ego development* is an inferred concept uniting interrelated progressions of cognitive, interpersonal, and ethical development into successive hierarchical world views. Each stage is a characterology whose representative types, from Archie Bunker to Mahatma Ghandi, illustrate qualitatively different ways of responding to life experience.

Ego development is considered by Loevinger to be not just a personality trait, but *master trait* second only to intelligence in determining an individual's pattern of responses to situations. In her scheme of ego development there is a succession of qualitative turning points that Loevinger calls milestone sequences. These milestone sequences (see Table 3) represent broad patterns of change involving many aspects of personality; thus the presence, absence, or intensity of a single personality trait is best interpreted in the context of how that characteristic fits into an interrelated sequence of development. Loevinger uses the term "milestones" to emphasize that her system moves away from measuring polar variables (measuring a trait present or absent, high or low) toward defining and measuring qualitative shifts in a trait that mark steps in a continuous progression.

This distinction highlights a different way to examine particular traits as part of development. For example, concern for achievement is most pronounced at a stage of ego development mid-way in the sequence. A woman with little apparent urgency about achieving may be at lower stages, or may have gone beyond to higher stages in which the concern related to achievements is often cast in terms of individual fulfillment, rather than the more conventional term of achievement. Loevinger's concept of milestone sequences, in which a given trait can transform and appear in a different context, allows us to place this woman's "lack of achievement motivation" in perspective.

Reading down the columns in Table 3, are successive levels of complexity in each facet of development; reading across are the broad character patterns of each stage. While this is only one way to label complex phenomena, there is substantial empirical evidence to support this formulation. Moreover, to most

Table 3: Some Milestones of Ego Development

Stage	Impulse Control, Character Development	Interpersonal Style	Conscious Preoccupations	Cognitive Style
Impulsive	Impulsive, fear of retaliation	Receiving, dependent, exploitative	Bodily feelings, especially sexual and aggressive	Stereotyping, conceptual confusion
Self-Protective	Fear of being caught, externalizing blame, opportunistic	Wary, manipulatiive, exploitative	Self-protection, trouble, wishes, things, advantage control	
Conformist	Conformity to external rules, shame, guilt for breaking rules	Belonging, superficial niceness	Appearance, social acceptability, banal feelings, behavior	Conceptual simplicity, stereotypes, cliches
Conscientious-Conformist (Self-Aware)	Differentiation of norms, goals	Aware of self in relation to group, helping	Adjustment, problems, reasons, opportunities (vague)	Multiplicity
Conscientious	Self-evaluated standards, self-criticism, guilt for consequences, long-term goals and ideals	Intensive, responsible, mutual, concern for communication	Differentiated feelings, motives for behavior, self-respect, achievements, traits, expression	Conceptual complexity, ideals of patterning

Table 3 (continued)

Individualistic	*Add:* Respect for individuality	*Add:* Dependence as an emotional problem	*Add:* Development, social problems, differentiation of inner life from outer	*Add:* Distinction of process and outcome
Autonomous	*Add:* Coping with conflicting inner needs, toleration	*Add:* Respect for autonomy, interdependence	Vividly conveyed feelings, integration of prysiological and psychological, psychological causation of behavior, role conception, self-fulfillment, self in social context *Add:* Identity	Increased conceptual complexity, complex patterns, toleration for ambiguity, broad scope, objectivity
Integrated	*Add:* Reconciling inner conflicts, reunciation of unattainable	*Add:* Cherishing of individuality	*Add:* Identity	

Note: "*Add*" means in addition to the description applying to the previods level.
Source: Adapted from *Ego Development: Conceptions and Theories*, by Jane Loevinger (San Francisco: Jossey-Bass, 1976) pp. 24-25. Reprinted by permission of Jossey-Bass.

people the progressions make intuitive sense. It is obvious that change in one aspect of development is likely to stimulate change in another; conversely, if there is little movement in one facet, further development is necessarily restricted. Consider, for example, how difficult it would be to have a deeply held respect for the individuality and autonomy of others (a salient concern at the Autonomous State) if appearance and social acceptability were predominant life-themes, and one thought in stereotypes and cliches (characteristic of the Conformist Stage).

It is helpful to have a more solid sense of these stages when considering their relevance to education (for a more complete description see Loevinger 1976, pp. 18-28). The earliest stages are usually thought of as childhood stages and may be grouped in the larger category of preconventional stages. An adult at the *Self-Protective Stage* would be concerned with control and advantage in relationships; would follow rules opportunistically, would reason illogically and think in stereotypes; would tend to see life as a zero-sum game; and would externalize blame to other people or to circumstances. Such a person would have great difficulty succeeding in college.

Moving to the next larger category of stages, the conventional stages, a student at the *Conformist Stage* would be concerned with appearances and social acceptability; would tend to think in stereotypes and cliches, particularly moralistic ones; would be concerned about conforming to external rules; and would behave with superficial niceness. Emotions would be described in undifferentiated terms that betray little introspection. Group differences would be perceived in terms of external characteristics such as age, race, marital status, nationality. There would be almost no sensitivity to individual differences.

At the *Conscientious Conformist Transition*, or *Self-Aware Level*, an individual develops an increasing self-awareness and the ability to think in terms of alternatives, exceptions, and multiple possibilities in situations. Students at this stage are sometimes painfully aware of their separateness in relation to social groups; they are concerned primarily with taking advantage of opportunities, solving problems, finding reasons for the way life works, and adjusting to situations and roles.

At the *Conscientious Stage* an individual lives by self-evaluated standards in relation to society. Rules are not absolute; exceptions and contingencies are recognized, and reasoning is more complex, based on analytical patterns. A student at this stage would be concerned about responsibility and mutuality in relationships; would see people as having individual choices over their destiny; would value achievement highly and be concerned

with self-respect; would have long-term goals and ideals, and a tendency to look at events in societal terms, or in a broad social context. The bulk of 18-to-22-year-old college students are found in those last two stages; adult students exhibit a broader diversity of stages.

The *Autonomous Stage* represents a major shift, since this world view is achieved when the conventional is transformed to a post-conventional view: one can analyze and critique one's own social group, and other social systems, and must make choices and commitments within that awareness. An ability to acknowledge inner conflict is a hallmark of this stage; also there is a respect for others' autonomy (for example, allowing one's children to make their own mistakes) while valuing interdependence. A student at the Autonomous Stage would take an expanded view of life as a whole; would tend to be realistic and objective about him- or herself and others; would be able to unite and integrate ideas that appear as incompatible opposites to those at lower stages; and would have a cognitive style characterized by complexity and a high tolerance for ambiguity. Self-fulfillment becomes an important concern and more conventional notions of achievement are less valued. Feelings are expressed vividly, including sensual experiences and the kind of existential humor that is inherent in life's paradoxes. The highest stage, the *Integrated Stage*, intensifies these desirable characteristics and adds reconciliation of inner conflicts in a more consolidated sense of identity.

To summarize, we can expect most traditional-age college students to be at the Conformist or Self-Aware Level, and then move beyond, although probably not past the Conscientious Stage. Some students will be at preconventional stages; they can be expected to have serious trouble making their way in any college environment. Those at the Conscientious Stage and beyond should tend to do better, although this relationship may not necessarily be apparent in individual grade-point averages. An interesting question is how far beyond conventional stages adult students have ventured. Data from adult students in nontraditional undergraduate programs suggest that they have moved far beyond indeed, much farther than is believed to be representative of the general adult population.

Frames of reference for education

Structural development stages can be seen as describing the frame of reference we have for creating and maintaining meaning in our lives. In short, the frame of reference is a "meaning

perspective," a psychological structure "within which we locate and define ourselves and our relationships" (Mezirow 1978). This is one of the most useful contributions of this research: regardless of which sequence or theorist one uses as a basis for understanding, tracing these progressions highlights patterns underlying very real and pervasive differences in students' responses to course content, academic environments, and capacities to be successful students.

Lasker and de Windt used Loevinger's work to conceptualize stage-related differences in definitions of knowledge, the uses and origin of knowledge, motives for education, conceptions of learning process, teacher and student roles, and the function of an educational institution. Their conceptualizations (see Table 4, taken from Weathersby 1976, pp. 68-9) show a progression of views of knowledge, from experiencing knowledge as a means to concrete, instrumental ends, to a means of gaining stature and approval in valued social roles, to know-how and competence in work and social roles, to self-knowledge and as a means for apprehending a complex world. Concomitant with these views, the teacher's role changes from demonstrating and enforcing, to revealing truth as an authority, to being a role model and evaluator of students' competencies, to being a facilitator for students' emerging levels of insight. The student's view of the institution's function shifts also from showing how things should be done, to providing basic information and certifying the level of internalization, to providing opportunities for skills development and certification, to fostering personally generated insight by posing questions, highlighting dilemmas, and providing new experiences. These distinctions are provocative in their detailing of how the successive world-views of the stages may shape students' experience of their education.

Perry's work expands on Lasker's more speculative approach because his research examined and then defined students' intellectual development and ethical views during four years of full-time study. By looking closely at both an educational environment and the students in it, Perry has been able to delineate a progression of development in relation to students' conceptions of knowledge and of authority and, thus, of what their education meant and what was their experience of it.

The scheme (see Figure 3) was derived from open-ended interviews with two groups of Harvard undergraduates, each studied longitudinally as they progressed from freshmen to seniors. Students were asked what stood out for them about their year's experience and their answers reflected problems and dilemmas in figuring out what it took to succeed in the college

Table 4: Implications of Ego Stage for Adult Education

Ego Development	What is knowledge?	What use is knowledge?	Where does knowledge come from?	Motive for education
Self-Protective	A possession which helps one to get desired ends; ritualistic actions which yield solutions.	Means to concrete ends; used to obtain instrumental effects in world; education to *get X*	From external authority; from asking how to get things	Instrumental; to satisfy immediate needs
Conformist	General information required for social roles; objective truth, revealed by Authority	Social approval, appearance, status used to meet expectations and standards of significant others; education to *be X*	From external authority; from asking how things work	To impress significant others; to gain social acceptance and entry into social roles
Conscientious	Know-how: Personal skills in problem solving; divergent views resolved by rational processes	Competence in work and social rules; used to achieve internalized standards of excellence and to act on or change world; education to *do X*	Personal integration of information based on rational inquiry; from setting goals, exploring causal relationships and asking why things work	To achieve competence relative to standards of excellence
Autonomous	Personally generated insight about self and nature of life; subjective and dialectical; contradiction and paradox as central	Self-knowledge; self development; used to transform self and the world; education to *become X*	Personal experience and reflection; personally generated paradigms, insights, judgments; from asking if things are as they appear	To deepen understanding of self, world, and life cycle; develop increasing capacity to manage own destiny

Table 4 (continued)

Institutional Function	Learning Process	Teacher Role	Student Role
To enforce learning by providing examples, showing how things should be done	*Demonstration:* showing how to	*Enforcer:* Teacher as agent who focuses attention and shows how; focus: showing	Student acts as imitator of activity
Provide pre-packaged general experience or basic information; to certify level of information internalization	*Revelation:* of truth by expert authority; if conflict between ideas is perceived, one element is incorrect	*Instructor:* Teacher as presenter of information (often in impersonal group mode, e.g. lecture); focus: verbal presentation	Student as subordinate in frequently impersonal relation with teacher, student internalizes and parrots information
To provide structured programs which offer concrete skills and information, opportunities for rational analysis, and practice, which can be evaluated and certified	*Discovery* of correct answer through scientific method and logical analysis; multiple views acknowledged but congruence and simplicity sought	*Role Model and Evaluator:* Teacher models skills, poses questions, outlines forms of discourse, evaluates analytic abilities and skill competencies; focus: apprenticeship, internship	Student as subordinate in substantial personal interaction with teacher; student analyzes and critiques information, practices competence
To provide new experiences, to ask key questions; to pose key dilemmas; to foster personal experience and personally generated insight; to highlight significant discontinuities and paradoxes	*Emerging levels of insight:* learning entails reorganizing past insight into new personally generated paradigms through new experiences. Learning follows dialectical process in which contradiction and multiplicity of views is itself of interest	*Facilitator:* Teacher sets up experience and reflective observation by students, is a resource for planning and evaluation; focus: facilitating	Student defines purposes in collegial relationship with teacher as equal participant; emphasis is on personal experience, creating own interpretations and meanings, transforming meanings

Source: Harry M. Lasker and Cynthia deWindt, "Implications of Ego Stage for Adult Development" (Cambridge, Mass.: Harvard Graduate—School of Education, 1978). (Mimeographed.)

environment and what their education meant in both broad and narrow terms. The scheme presents a codification of the forms, or patterned progression of thinking, underlying their replies.

Perry's scheme traces students' development from basically seeing the world in *dualistic* terms, in which authority is invested with the power and knowledge of what is right, to seeing *multiplicity*. In the various positions within multiplicity, the student can see and understand more than one point of view, is able to question authority and to appreciate if not celebrate the complexities of a relativistic world. The final cluster of positions address the development of commitment within that relativistic world. *Commitment* provides both orientation and purpose that structure the individual's ways of knowing. Within this view, authority softens to become one of many sources of information.

Not everyone progresses smoothly through these positions; some respond to the challenge of a new position with retreat, temporizing, or escape. These responses reflect the intellectual and emotional trauma of changing one's world view. Perry's scheme can be seen as a record of major points of choice between fragmentation and integration, alienation and involvement.

In Perry's study the transition point most difficult for students seems to be the transition from Position 4 (legitimate uncertainty is extensive; "anyone has a right to his own opinion") to Position 5 (all knowledge is contextual and relativistic, including authority's). This shift involves discarding the view that knowledge is a quantitative accretion of discrete rightness, including the kind of discrete rightness in which everyone has a right to his own opinion, and adopting a conception of knowledge as the qualitative assessment of contextual observations and relationships. Although Perry's work has largely focused on the traditional-aged student, preliminary work using the scheme with adults (Griffin [n.d.] and Knefelkamp [n.d.], from unpublished research) both suggest that this is also the salient shift for the adult student.

By sticking close to students' experience and expressions of that experience, Perry has created a developmental scheme that is often found by college personnel to be the most easily understood and applied in their own work. Perry, himself, has been particularly sensitive to these issues of application. Pointing to how the scheme highlights individual differences, he observes:

> Our students must be considered a relatively homogeneous group in intelligence and academic ability, and yet our study reveals the wide range, in any one college year, of the ways in which they construed the nature of knowledge, the origin

Figure 3: Perry's Positions of Intellectual and Ethical Development

Main line of development

Position 1: *Basic Duality.* The student sees the world in polar terms of we-right-good vs. other-wrong-bad. Right Answers for everything exist in the Absolute, known to Authority whose role is to mediate (teach) them. Knowledge and goodness are perceived as quantitative accretions of discrete rightness to be collected by hard work and obedience (paradigm: a spelling te .).

Position 2: *Multiplicity Pre-Legitimate.* The student perceives diversity of opinion, and uncertainty, and accounts for them as unwarranted confusion in poorly qualified Authorities or as mere exercises set by Authority "so we can learn to find The Answer for ourselves."

Position 3: *Multiplicity Subordinate.* The student accepts diversity and uncertainty as legitimate but still temporary in areas where Authority "hasn't found the Answer yet." He supposes Authority grades him in these areas on "good expresssion" but remains puzzled as to standards.

Position 4: *Multiplicity Correlate or Relativism Subordinate.* (a) The student perceives legitimate uncertainty (and therefore diversity of opinion) to be extensive and raises it to the status of an unstructured epistemological realm of its own in which "anyone has a right to his own opinion," a realm which he sets over against Authority's realm where right-wrong still prevails, or (b) the student discovers qualitative contextual relativistic reasoning as a special case of "what They want" within Authority's realm.

Position 5: *Relativism Correlate Competing or Diffuse.* The student perceives all knowledge and values (including Authority's) as contextual and relativistic and subordinates dualistic right-wrong functions to the status of a special case, in context.

Position 6: *Commitment Foreseen.* The student apprehends the necessity of orienting himself in a relativistic world through some form of personal Commitment (as distinct from unquestioned or unconsidered commitment to simple belief in certainty).

Position 7: *Initial Commitment.* The student makes an initial Commitment in some area.

Position 8: *Orientation in Implications of Commitment.* The student experiences the implications of Commitment, and explores the subjective and stylistic issues of responsibility.

Position 9: *Developing Commitment(s).* The student experiences the affirmation of identity among multiple responsibilities and realizes Commitment as an ongoing, unfolding activity through which he expresses his life style.

Figure 3 (continued)

Conditions of delay, reflection and regression

Retreat: Active denial of the potential of legitimacy in Otherness; the student entrenches in the dualistic, absolutistic structures of Positions 2 or 3. Variants of retreat involve reaction, negativism, and becoming a dedicated reactionary or dogmatic rebel.

Temporizing: A prolonged pause (full year) in any position, exploring its implications or explicitly hesitating to take the next step but not entrenching in the structure of Escape.

Escape: Settling for Positions 4, 5, or 6, by denying or rejecting their implications for growth, using the detachment of these positions to deny responsibility for commitment through passive or opportunistic alienation.

Source: *Forms of Intellectual and Ethical Development in the College Year: A Scheme*, by William G. Perry, Jr. Copyright 1968, 1970 by Holt, Reinhart and Winston, Inc. Reprinted by permission of Holt, Reinhart and Winston.

> of values, the intentions of instructors, and their own responsibilities. The implications for the conduct of education are appalling, but there they are (Perry 1968, p. 215).

In examining some of these appalling consequences, Perry (in Chickering forthcoming) directs us to appreciate the courage such development requires, to respect the student's need to mourn over the losses that growth usually entails, to be prepared to "accompany" students in their struggle, and to respect students' needs to grow and change at their own pace.

Elaborating on the scheme, researchers have turned toward the curriculum itself, since Perry's observation above about the students' experience of the curriculum can also be reversed: curriculum can be examined for its underlying assumptions about the nature of knowledge. This research can also be applied directly to shaping instructional methods. In an application in an undergraduate English course at the University of Minnesota, Knefelkamp and Wideck divided students into two groups: those near Position 3 (Multiplicity Subordinate) were given highly structured assignments to explore contradictory and antithetical statements, whereas those near Position 5 (Diffuse Relativism) were asked to contrast their own position with that of characters in the readings. In the first group there was movement along the positions; in the second group there was no change. They hypothesized that the students in Position 5 had just recently arrived at relativism and needed more time be-

fore developing commitments (Knefelkamp 1974; Wideck 1975). Perry (Chickering forthcoming) has summarized the work relating to his scheme in the areas of student development, strategies for measuring position in his scheme, and implications for curriculum development.

Conditions for development

The task of accomplishing significant development in adulthood is no simple or easy one. Much of the early work in the field, despite the concerns about the need for post-conventional development, suggests that as a group most adults do not reach the higher stages in any of the developmental schemes. Although Piaget ascribes the development of formal intellectual operations to late adolescence (12 to 15; for some, 15 to 20), many adults do not reach formal operations, at least on Piagetian tasks. In contrast, Arlin's (1975) research supports the view that there is the potential for adults to develop beyond Piaget's stage of "formal operations" to a "fifth cognitive stage" that involves problem-creating. This is a qualitative advance beyond the problem-solving abilities required for formal operations.

Similarly, while the various stage schemes provide descriptions of the potential for development, many theorists posit that most adults remain at the conventional levels in their schemes. Loevinger sees the average American as a "conscientious conformist," a transition (from Stage 3 to Stage 4) that appears modal for some students during their first two years of college. Kohlberg believes his Stage 4, or "authority and social order maintaining orientation," *is* the modal stage for most adults. In Perry's scheme, these are the middle positions of multiplicity.

The question becomes: What conditions promote development for adults? This question is crucial because adults do not automatically reach the higher stages and because development is possible in adulthood.

It is not clear why for some people, at some point, development stops or why all adults do not move to the higher developmental stages. Development apparently stops when individuals do not have the disequilibrating experiences that lead to formulation of higher-stage structures, or when they cannot attend to the experience at all because they are psychically immobilized, frozen by fear, threat, or defensiveness. Other conditions may well place constraints on or minimize opportunities for further development. Environment is a powerful factor in facilitating development; poverty, hostility, or serious deprivation can place ceilings on growth.

Development can be seen as a personal act of will that involves overcoming considerable adversity: environmental, cognitive, and emotional factors all press toward maintaining equilibrium or the status quo. Change does not result when such equilibrium is deeply challenged and the usual ways of explaining and coping with experience are disconfirmed and inadequate. Then, restructuring may result. But even this basic description of stage change, which is drawn from work with children, may not apply precisely to adults, particularly adults shifting from a conventional to post-conventional orientation. Gibbs (1977) suggests that to understand this shift we must use existential metaphors to describe the tasks of these later stages. He argues that it is the existential task of creating significant meaning in one's life that shapes and empowers the conditions for development in the latter stages.

Further, such transitions are difficult. Frequently both intellectual and emotional trauma accompany changes in one's epistemological world-view. As Kegan (1975) once described it, while one is not going crazy, one may well be going "out of one's mind" as one progresses into a new framework. Perry emphasizes transition, seeing the most important educational implications of his scheme as highlighting the courage needed for this kind of transition and the importance to the student of being a confirmed member of a community that is supportive through the aloneness of that transition. Providing this kind of community and individual support is no easy task.

Each structural-developmental theorist looks at what provides the conditions for development in his or her scheme. Beyond the formal definition of incongruity and dissonance, it is apparent that there are some general conditions that probably aid and support development: a supportive community, a chance to try out new behaviors and new ways of thinking in a nonjudgmental environment; an opportunity to explore alternatives; and a sense that risk-taking is a valued activity, including the chance to explore various commitments and to reshape their meanings. In addition, an individual who has just completed the transition can provide a specific and sensitive support as a peer, colleague, or mentor (Turiel 1969, 1972). The good clinician, whether a practicing teacher or therapist of adults, has come to understand much about what the conditions are that support significant transitions resulting in personality change. In the end, at stake is exactly this kind of change.

For the educator, consideration of such conditions for development points to—and redefines—the old dilemma of balancing the affective and cognitive domains. As Loevinger is quick to

point out, it is a thoroughly out-moded conception: ". . . integration of observations into a coherent frame of reference is, obviously, cognitive, while anxiety is, obviously, affective. But the failure to attain a meaningful and coherent integration is precisely what generates anxiety" (Loevinger 1970, p. 8). When conditions for development are understood as a complex interweaving of aspects of human experience, then the role of education becomes one factor, one participating event, in such a web of circumstance.

Education and development

As the preceding discussion has shown, developmental stage theories provide increasingly complex and differentiated ways to understand adults—including educators—who are found in educational settings. Although the proportion of students (or faculty) at each stage will vary across programs and institutions, most groups of students will exhibit a wide range in ego levels. Adult students, taken as a group, probably exhibit both the highest stages and the greatest range of diversity. Adult students are diverse in motivation, cognitive style, conceptions of knowledge, conceptions of the locus of responsibility and role relationships involved in teaching and learning, and in affective style and ways of coping with institutions. Adult needs, therefore, argue for a similar diversity in areas such as grouping, selection, and guidance.

Given an understanding of stage concepts, educators must choose what stance to take in regard to developmental change. Knowledge of the interconnected progressions of developmental stages can be useful in instructional design and in the creation of challenging and effective learning environments, but developmental change usually is not a major stated objective. Alternatively, programs can be consciously designed to promote development to the next higher stage along an identified sequence. This distinction pinpoints the crucial dilemma inherent in thinking of education as embedded within a developmental-stage framework. Most education is not consciously designed to promote stage change, although components of stage change are implicit in most educational goals, educators may intend stage change without connecting their goals to these theoretical understandings.

Similarly, educational requirements of an institution may actually make certain stage-related achievements a necessity. Two examples are self-directed learning and self-evaluation. Stage theories can raise crucial questions concerning the purpose

and objectives of education. While most educational rhetoric identifies personal, ethical, or intellectual development as an objective or planned outcome of education, not everyone would agree that the objective is to promote the developmental progressions elaborated by the particular stage theorists.

To further complicate matters, those who are setting the objectives may be doing so from very different frames of reference. A close analysis of a faculty argument about life experiences or academic standards will reveal the hidden assumptions concerning the source of knowledge and authority and will then suggest the stage framework at play.

Similarly, educational programs and educational strategies are constructed consonant with particular stages. Kohlberg and Mayer (1972) identify three strategies for formulating educational objectives: the "bag-of-virtues" or "desirable-trait" strategy, which attempts to create psychically healthy people and is linked to what they see as a romantic educational ideology; the "industrial-psychology" or "prediction-of-success" school, which aims at developing skills and abilities that bring status in the school system and is linked to an educational ideology of cultural transmission; and a "developmental-philosophic" strategy, which is linked to Dewey's progressive ideology and the empirical sequences of development identified in this chapter. We see even these three strategies as broadly stage-related: the "bag of virtues" corresponding to a conformist orientation, the "success" school to a conscientious orientation, and the "developmental" view to an autonomous orientation. This serves to reinforce the use of developmental stages as a pervasive frame of reference for educational goal-setting.

Administrative practices such as grouping and guidance can also be understood as stage-related. For example, in grouping, when one thinks about stage-related needs, the desirability of heterogeneity so that students can learn from each other is confirmed. In extremely diverse groups there is the need to identify and support students at the earlier positions who are most vulnerable to epistemological shock. In selection and guidance (in areas such as curriculum, tracking, college admissions), Perry says that knowledge of his scheme sharpens unresolved problems of prediction. For example, students who have done well in a "traditional" school may reflect the outlook of Positions 1, 2, 3, or 4. To predict how well they will do in a college that encourages relativism requires knowledge of whether their preference for dualism reflects a closed or defensive personality system, or merely lack of the kind of experiences that would foster relativism. It is also important to know whether success in

classes that require mostly memorization and simple application includes aptitude for the higher-order intellectual operations of relativism. Chickering (1969), in a study of personality development among traditional-age students, describes college dropouts or stopouts as those who are mismatched with the institution. Goldberg's research at Simon's Rock Early College concurs (1977).

But this discussion assumes a different cast when the subject is college admissions, grouping, and tracking for adults. Many adults and many colleges have traditional outlooks; relativism is not a universally-shared cultural value. Colleges do not play the same role in adults' lives as they do in the lives of 18-to-22-year-olds, nor do colleges have the same incentives for selective admissions, except perhaps in graduate or professional programs. But adults need to know whether they will do well if they enroll and whether a college's orientation meets their needs; and colleges need to make informed decisions concerning program admissions and instruction. Again, the developmental schemes can provide a way to think about and engage some of these issues.

In summary, it is important to apply adult development theory to educational settings. It is especially important to consider the conditions that promote the shift from the conformist to a post-conventional orientation. Society needs individuals who can cope with a world of uncertainty, rapid change, and global interrelationships, which in terms of developmental levels means people at the higher stages. But this post-conventional perspective means taking a critical and relative perspective on society's rules, a post-societal perspective. It is probably difficult for a democratic, egalitarian society to choose to foster a level of development higher than the modal stage of the majority of its people. Plato's *Republic* attempts to resolve this difficulty, but Plato's resolution has little relevance for a society with individualistic, egalitarian values and a decentralized system of education and social services. We are left sorting through the interconnectedness of individual, institutional, and cultural change, aware that education, as well as developmental theory, can only play a midwife's role—present and significant at birth but in no way in control of the outcome.

Areas of Application and Steps Toward Change

Starting points: the state of the art

The application of a body of psychological knowledge to educational practice can be problematic. The word "application" assumes that people start with a particular body of knowledge or theory and then create a program or institution consistent with it. This is implicitly true, in that all our ways of doing things reflect assumptions that are often hidden. Applications of new theoretical perspectives, however, are rarely straightforward; not only is it extremely difficult to break out of old habits of thought but the ideas themselves are still murky and entwined, an expected condition when a theory is still young (Kuhn 1962).

Instead of applying theory, program developers usually start with a general awareness of a need, sometimes intuited, sometimes pragmatic, and then go on to create programs that attempt to address a series of competing factors. Often it is not until a program is successful that its staff and faculty can articulate the reasons for its success, much less the principles that informed its design. Thus, while there have been many innovative efforts on behalf of adult learners, and we wish to applaud and not discount them, we feel compelled to say that in our view there have been few thoughtful and systematic applications of current theoretical knowledge about adults. In these efforts there is the excitement and frustration of pioneering, and there is much yet to be done.

In this section we summarize the major implications drawn from life-cycle research and the formulations of hierarchical and structural stages of development. Following that we consider implications for program development and strategy, curriculum and teaching methods, faculty development and evaluation, and counseling and support services. We will describe a few settings in which staff have self-consciously employed knowledge of adult development to shape or reshape their ways of operating. In addition, this chapter provides sources of further information on applications of adult development theory.

Development as an outcome of study

First, we must acknowledge that development is a major outcome of students' experience in higher education, and in many

important ways inextricably related to the aims of true education. Whether programs are consciously designed as such, education *is* a developmental intervention in adults' lives, an activity that is by its very nature linked to processes of growth, development, change, and transformation.

We have sometimes acknowledged that this is the case with education for children and young adults; this is also the case for adults at all life stages. Whether we choose to promote development or merely acknowledge its implicit presence, we now have a better way of understanding differences among adult students. These differences include life situations that give rise to further needs and desires for education, the adaptive tasks of the life-cycle that accompany academic study, the frameworks of meaning and motivation to which new cognitions, attitudes, skills, and behaviors are assimilated, the differential importance and perceptions of various features of an instructional environment, and the outcomes of study that are most personally valued.

Mezirow (1978) labels these processes of change as "perspective transformations": understanding of the psycho-cultural assumptions on which individuals have based their lives leads to a new perspective for interpreting them. The concept has practical uses. Mezirow uses it, for example, to describe phases of women's experience in various reentry programs (1978). Other work on the nature of transition (Tarule 1980) details an evolutionary sequence or "steps" in the creation of new meaning frameworks and shows how experiences of individualized study differ depending on the step one is in.

Chickering (1976) argues that development is a major outcome of study; in fact, an entire volume with more than 40 contributors, titled *The Future American College* (Chickering forthcoming), elaborates this view. The volume begins with the assumption that future colleges will have a greater diversity of students, including older students with more diverse goals and life situations. The initial chapters describe various aspects of development; later chapters review curriculum applications across a variety of professions and disciplines, and then discuss topics such as evaluation and grading, educational advising and career planning, residential learning, extracurricular activities, student-faculty relationships, individualized education, experiential learning, mediated learning and educational technology, and assessing and credentialing prior learning. In some of these areas the *content* of adult development theory is useful; in other areas, the *perspective* that development should be the outcome suggests different procedures and organizational arrangements for higher education institutions.

Education as a support for life transitions

A second major outcome of research on adult development is to make us more conscious of the role that education and educational institutions can play as supportive environments for individuals in life transitions. Professionals in student development have carried this concern for years, (Chickering 1969), and there is current work applying a developmental perspective to students of traditional college age and earlier (Goldberger 1979; Barna, Haws, and Knefelkamp 1979; Sprinthall and Mosher 1978; Belenky, Tarule, and Landa 1979). However, in the work the variable of age is significant only after the commitment is made to see education developmentally.

Research on the adult life cycle gives us greater knowledge of the issues and tasks of adult lives, an awareness of the function of education in mediating life transitions, a healthy respect for disequilibrium in others and in oneself, and explicit recognition of the importance of life-structure and identity changes as education becomes a part of both career and personal development. This research calls for a reconceptualization of programs and institutional strategy for identifying and serving adults. Within our society the need is to create expectancies that adults change and develop, and to create more opportunities for adults to use the resources of our educational system in that process. We have a tremendous opportunity to replace the lockstep of a one-chance educational system with one that has multiple entry points and methodologies, and allows the pursuit of multiple educational goals from gaining practical job skills and credentials to self-enrichment.

One starting place is to reconsider the usual answers to the parallel questions: Whom do we serve? and What do they need? Looking at the stratification of current and potential students by age group and sex in conjunction with notions of life tasks and developmental sequences is a starting place. This can result in identifying ways to teach current students more satisfactorily and in the design of new programs for new groups of students. Existing programs might also be redesigned to more clearly serve a particular group of students.

Some colleges, for example, have been turning with considerable success to senior citizens as potential students. External degree programs, weekend colleges, competency-based professional training, and other mechanisms of nontraditional higher education are suited to adults with work and family commitments who cannot study in the traditional manner. Elderhostel, a national network providing noncredit courses for re-

tired adults, is a thriving success. Additionally, within traditional institutions it is possible to identify particular groups of adult students who have special needs and develop appropriate services, such as reentry support groups for women. If colleges take adult students seriously, they will design more flexibility into course structures and teaching methods, as well as into meeting times and places and support services. Miller (1978) argues that colleges must reconsider their traditional ways of organizing instruction so they can retain adult students. This may be viewed as a practical necessity; it also expresses a valuing of individual students and their particular needs in addition to institutional exigencies.

It is possible to oversimplify this concern by responding only to sex and age, thus creating programs targeted only to women or older adults. This focus may be temporarily useful; however, the real task lies in responding to students of all ages with greater respect for their diversity and in enabling access and appropriate instruction for students whose needs do not fit a lockstep curriculum (Greenberg, Bergquist and O'Donnell, 1980).

Program development and strategy

A major question for program development is whether it is necessary to create new programs or institutions as a response to this research, or whether we can simply put this knowledge to use to improve the quality of existing programs. It is our belief that we must do both. Students can benefit by knowing more about their own patterns of development. Classroom teachers can use knowledge of adult development informally to respond to students and, more formally, to design courses, independent study experiences, or other forms of instruction. Program administrators can use knowledge of adult development to examine the internal logic and congruency of a program's design and its match with students' needs. But there is a paradox here: the central value of this research is in "tuning our ears," so that we respond to other individuals in ways that provide both support and challenge. These responses are difficult to organize on a program-wide or institution-wide basis; yet without changes in program structures or institutional procedures, application is problematic and piecemeal, and education is less than it might become. Additionally, the scale and scope of potential applications vary enormously whether one thinks in terms of improving teaching in a single course, redesigning a program of study, or scrutinizing the offerings of an entire university system.

Implications also differ depending on whether one works

within the traditional course structure of an undergraduate college or graduate program, or in a continuing education division, external degree program, individualized program, or other program structured differently for adults. Responding to adults' diverse and particular needs appears easier at the margins of most institutions and less likely at the core. The history of this exclusion is clear: adults are offered continuing education programs but are not admitted to matriculating status in the "real" college.

Explicit linkages among curriculum content, desired outcomes, and teaching methods are rare in higher education. We are usually content to leave unexamined the assumptions underlying traditional practices. Thus, attempts to articulate program design principles that reflect adult development generally come from experiences with adult students in nontraditional programs.

For example, Greenberg (1978), using the literature on adult development, analyzes the eight-year experience of creating a University Without Walls at a small private college. She creates guidelines for curriculum content appropriate to adult learners and relates the program structure and academic process and procedures of both a four-month entry experience for adults and an entire UWW liberal arts degree to adults' developmental needs and tasks. In retrospect, among the organizing principles she derives are: the importance of individualizing academic content and procedures; the necessity for both theoretical and experiential methods of learning (adults, unlike traditional-age undergraduates, are usually "experience rich" and "theory poor"); the realization that adults' "teachable moments" arise out of periods of internal transition or external "marker-event" changes; and the understanding that the nonclassroom aspects of college life are not usually available to adults, so that there must be some provision for group support, mentor relationships, and extended community. There is also a need for program staff and faculty who understand adult development and can relate to adults as equals, and the necessity for program staff to be able to relate well both to competent, self-directed learners and to students with few resources and little aptitude.

Similarly, a review of the implications of research on adult development on degree program planning in a nontraditional, external degree program at Empire State College (Lehmann and Lester 1968) highlights many practical applications, particularly diagnostic ones, in helping adult students to formulate and clarify educational goals, to understand their own developmental needs in the context of life planning, and in enabling mentoring

relationships, program structure, and even graduation ceremonies to be responsive to life-stage concerns. Concepts such as peak experiences and marker events suggest, for example, that individualized programs need to pay more attention to situations such as degree reviews or graduation ceremonies, because for the adult student they symbolize larger meanings than simply getting the degree.

This reconceptualization of program structure is more often than not a collaborative effort, with many of the supporting documents available in the form at working papers or on-going reports. Some available resources include *Designing for Development*, a report of collaborative efforts of four institutions supported by the Fund for the Improvement of Postsecondary Education, 1979; the *Resource Handbook* of the Institute for Academic Improvement at Memphis State University's Center for the Study of Higher Education; and a series of working papers available through the Office of Research and Evaluation at Empire State College.

Curriculum and teaching methods

There are many applications of adult development research to improved teaching. The developmental sequences presented earlier show a wide range of conceptions of knowledge, the learning process, and the teacher's role. Generally, some kind of a matching process is needed (Hunt 1974), so that the institution, program, or classroom is consonant with the student's developmental level or more likely his or her range of levels.

Schemes of cognitive development, particularly Perry's work, have direct application to the design and sequencing of instruction: for example, in the assignments, lectures, and examinations of even very traditionally structured courses. Essentially, a developmental view calls attention to process variables in a teaching situation that are critically influential if students are to engage in the difficult work of moving from position to position. The basic variables in the interaction are a combination of challenge and support: the difficulty is that students at different developmental stages experience very different things as challenging or supportive. Crucial aspects of a situation appear to include the amount of structure provided by the instructor for the intellectual tasks given to students; the degree of diversity in the situation; the amount of direct experience provided in relation to more cognitive content; and the degree of "personalism" or personal acknowledgement and relationship incorporated in the learning situations. Students at the lower stages need more

structure, less diversity, more direct experience, and a personal atmosphere in the classroom. These same conditions can be experienced as constraints by students at higher stages (Knefelkamp and Cornfeld 1979). Students' excitements, stumbling blocks, and the supportive conditions that enable developmental change differ dramatically.

This implies recognition of methods of individualized education, as well as the value of experiential learning, not employed willy-nilly but with a clinical appreciation of where a student is in a sequence of developmental patterns and what might be next steps. The state of the art in these endeavors is preliminary. More is known about the methodology than is known about their precise connections with development; nevertheless, staff of individualized programs often implicitly recognize the linkages and react with sensitivity and skill. (For information about individualized education, see Lindquist, ed., n.d. and Vermilye, ed., 1975. Sources of information on experiential learning include Keeton and Associates 1976 and Keeton and Tate 1978).

Others have considered the importance of process variables in describing effective strategies for teaching adults. Knowles has long been writing about andragogy as opposed to pedagogy (1970): the difference is that the word pedagogue was first coined to describe a person who led children. Methods of andragogy, appropriate to adults, are those that enable the student to be self-directing, and those that place a value on interpersonal climate and organizational procedures that facilitate self-direction. Similarly, Friere (1969) has described education for adults as a process of liberation gained as one becomes a participating member of a culture and comes to be a problem-poser and creator as well as a problem-solver, a person of "critical consciousness" (1973).

The fundamental difference is a philosophical shift consistent with the higher-stage views of teaching and learning. Instructors are above all considered to be facilitators whose task is to use their own authority, which is a consequent of their greater knowledge, to evoke in students a sense of authoritativeness, with sensitivity to how that can occur among people whose levels of competence are different.

There are some descriptions of how to teach "developmentally" in various formats. Charland (forthcoming) describes the use of group methods to build a supportive learning community. Torbert (1975) describes the difficulty and challenge of teaching a required course in "action learning" for 400 people at Southern Methodist University's School of Business. He develops a theory of "liberating structures," which are structures that can

help students "change stage" in conceptions of learning. Argyris and Schon (1975) describe ways to promote "double-loop" learning, where one questions the previous structuring of reality and revises action strategies as the result of new information received in a qualitatively different framework. Developmentally sensitive educational designs also have led to a renewed interest in worskshops or intensively designed learning experiences (Lasker, Donnelly, and Weathersby 1975; Oja, 1979; Belenky, Landa, and Tarule 1978).

Faculty development and evaluation

All of this information about pedagogy is relevant to faculty who want to teach better. This assumes, of course that there are rewards for good teaching and for teaching adults—a permise that some dispute (Cross 1977). Knowing the variations in development that shape students' responses is useful to instructors. It helps bring order out of a puzzling diversity of response, and relieves the instructor of the necessity of being all things to every student, while simultaneously enabling a better response to individual and group differences. Understanding some of the developmental sequences also provides insight into the context of the curriculum itself. Early in his work, Perry (1970) analyzed examination questions and found that they related directly to positions on his scheme. Thus, material may be organized, presented, and understood very differently depending on the developmental stage of the faculty member. Evaluation of instruction is more useful in a developmental context because it places judgments about the quality of teaching and learning in a dynamic framework with many variables. Additionally, faculty are developing adults themselves, subject to the same processes of growth as their students. Some work has been done on faculty career stages (Faculty Career Development 1979) and on the intersection of life-cycle stages with faculty and administrators' career concerns (Hodgkinson 1974). It is always good to begin reform at home. The bibliography of this monograph contains the raw materials for a faculty development program.

Career development, counseling, and support services

A final area of application involves counseling and student services. Knowledge of developmental tasks and sequences is useful for counseling student activities staff, residence hall staff, and those who work with career planning and placement. Usually these services are organized separately and without an under-

girding philosophy. Often adults are served separately or not at all.

The Adult Life Resource Center at the University of Kansas serves as an example of a conscious application of adult development research. Counseling staff at that institution have transformed an advising and counseling service for continuing education students into an adult education programming unit designed to help adults deal with life-cycle change (McCoy 1977). They first changed their name from "student services" to a title that stressed the adult rather than student status of their clients, and then planned a series of workshops taught by faculty and community leaders around life-cycle concerns such as career development, the dual-career family, assertiveness, coping with life transitions and stress, family communication, family history, and death and dying. Readers and training manuals are available for both life-cycle and career development workshops (see McCoy, Ryan, and Lichtenberg, 1978). Subsequently, the center has broadened its function to include training of human-service professionals in issues of the adult life-cycle. Here, the university provides a public service that is clearly the mandate of extension programs in public institutions: the difference is the explicit focus on substantive areas of change in adult life.

The basic change in their operating philosophy also illustrates a shift away from a medical model of "treatment," in which the staff or faculty have ultimate authority, to an educational model that incorporates individuals as active participants in their struggles to restructure the meaning of life events and to use knowledge and theory about personally relevant matters to arrive at new understandings. A similar change occurs in attitudes about teaching and support services when the implications of a developmental perspective are taken seriously.

In addition to developing programs around life-cycle tasks, it is useful to develop counseling and career development programs in conjunction with some of the emerging ideas on what generates the process of developmental stage changes. Perry's model has been used in this way, with emphasis on the need for counselors to become "developmental instructors," helping clients think more completely about their situations (Wideck, Knefelkamp, and Parker 1975; Knefelkamp and Sleptiza 1976).

Steps toward change

In the next decade educators will have the opportunity to take part in the general social trend of humanizing our institutions. Adult students by their increasing presence are creating a need

for some accommodations in our institutions of higher education. We have the opportunity to use their presence to create new quality standards for higher education (Greenberg 1979a). This response on our part could create second chances for adult students in addition to revitalized institutions.

Because the differences of age, sex, life-phase, and developmental stage are more clearly identifiable in adulthood, adult students need us to be more sensitive to individual variation when we design formal educational experiences. This could be crucially important in the future as institutions respond to more diverse groups of students, which include adults, and it could dramatically change the nature of higher education.

The initial steps are simple. We must: (1) identify the groups and variety of students to be served; (2) become sensitive to their goals and learning needs viewed from the broad and specific perspectives of human development; (3) define educational aims at least partially as promoting individual development; and (4) then reexamine the areas of program development and strategy, curriculum and teaching methods, faculty development and evaluation, and counseling and support services.

Our final question is: Can the presence of adult students and increased knowledge of adult development become a fulcrum for improving higher education? We hope so. Surely, we now have new ideas with which to tackle the perennial issues of access and quality.

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